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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

NARAYANASWAMY, SINDYA

ART UNIT	PAPER NUMBER
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2174

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/545,394

Applicant(s)

BHOJ ET AL.

Examiner

Sindya Narayanaswamy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. Claims 1 - 18 are presented for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-16 are rejected under 35 U.S.C 103(a) being unpatentable over Smith, US-5,878,224 in view of Rawson, III et al, US-5,265,252 (hereinafter Rawson).

4. As per claims 1 and 9, Smith teaches an admission control system for a server application system, comprising:

a request/listen queue (read mass storage as queue) that stores incoming requests before the incoming requests are serviced by the server application system (402, Fig. 4);

an actuator coupled to the queue to determine the input rate of incoming requests from the during processing cycles, to send a target number of requests to the request queue and a remaining number of requests to the discard queue during the next processing cycle and a controller coupled to the actuator and the request queue to determine the target number based on the difference between the actual and the desired queue occupancy of the request queue (Fig. 4, 400; col. 2, lines 50-61).

Smith does not teach a discard queue that stores requests to be. However, Rawson teaches a discard queue (card request queue) that stores requests to be discarded (col. 5, lines 38-44). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Rawson with Smith in order to create a queue to hold requests to be discarded if the target number of requests has been exceeded. One of ordinary skill in the art at the time of the invention would have been motivated to do so because requests are not lost or rejected due to system overload.

5. As per claims 2 and 10, Smith teaches the system substantially as claimed wherein the target number of requests (incoming workload is matched to the transaction workload) are sent to the request queue during the current processing cycle if the input rate is greater than or equal to the target number (reducing rate of transaction acceptance) (col. 2, lines 50-62).

Smith does not teach the system of sending the remaining number of requests to the discard queue. However, Rawson teaches the system of sending remaining requests to the discard queue (card request queue) (col. 5, lines 38-49). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Rawson with Smith in order to create a system where overflow requests are temporarily diverted to a storing (discard) queue. One of ordinary skill in the art would have been motivated to do so in order to prevent requests from being ignored due to system overload.

6. As per claims 3 and 11, Smith teaches the system wherein the actuator determines which requests are sent to the request queue so long as the total number of the requests sent to the

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request queue is equal to the target number (Fig. 5, col. 2, lines 50-61). Smith does not teach the system wherein the actuator randomly determines which requests are to be sent to the discard queue. However, Rawson teaches the system wherein the actuator randomly determines which requests are sent to the discard queue (col. 5, lines 38-49). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Smith and Rawson in order to create a system where an actuator directs requests to a request queue and a discard queue. One of ordinary skill in the art would have been motivated to do so because it prevents system overload and threshold violations.

7. As per claims 4 and 12, Smith and Rawson do not teach the adaptive admission control system wherein the actuator determines if the request is a new session request and sends an existing session request from the discard to the request queue when the discard queue contains the existing session request and sends the new session request to the discard queue. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to teach the adaptive admission control system wherein if the actuator decides to send a request to the request queue, the actuator determines if the request is a new session request and, if so sends an existing session request from the discard queue instead of the new request to the request queue and discards the new request to the discard queue because it would allow for a first in first out queuing system where requests are processed in order.

8. As per claims 5 and 13, Rawson teaches the system, including a listen queue and actuator, wherein the actuator sends the target number of requests from both the listen queue and

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the discard queue to the request queue if the input rate is less than the target number (col. 5, lines 38-49). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Smith with Rawson's method of sending a target number of request because it attempts to maximize the capacity of the system while maintaining balance. One of ordinary skill in the art at the time of the invention would have been motivated to do so because prevents system overload.

9. As per claims 6 and 14, Rawson and Smith do not teach the system wherein the actuator retrieves requests from the discard queue by first pulling requests from an existing session queue of the discard queue. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to create a system where requests are retrieved from the existing session of the discard queue first in order because it insures that requests are processed in the order that they are made.

10. As per claims 7 and 15, Rawson teaches a control system wherein the discard queue comprises an existing session request discard queue and a new session request discard queue (94/32-94/34, Fig. 3). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Smith with Rawson's method of maintaining two discard queues because maintains requests in an organized fashion. One of ordinary skill in the art at the time of the invention would have been motivated to do so because alleviates the process of retrieving requests from the discard queue manageably.

11. As per claims 8 and 16, Rawson and Smith do not teach the adaptive admission control system wherein the discard queue is cleaned up after every predetermined number of processing cycle. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to clean up the discard queue because it would provide for a refreshed queue.

12. Claims 17 and 18 are rejected under 35 U.S.C 103(a) being unpatentable over Smith, US-5,878,224 in view of Rawson, III et al, US-5,265,252 (hereinafter Rawson) further in view of the Applicant's Admitted Prior Art (hereinafter AAPA).

13. As per claim 17, Smith and Rawson do not teach the system wherein the server application module is a TCP/IP-based server application. However, the AAPA teaches the system wherein the server application module is a TCP/IP-based server application (page 2, lines 5-12). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of the AAPA with Smith and Rawson in order to create a server application module with a TCP/IP-based application. One of ordinary skill in the art at the time of the invention would have been motivated to do so because it is a protocol commonly used in the art to enable internetworking.

14. As per claim 18, Smith and Rawson do not teach the system wherein the server application module is a web server application. However, the AAPA teaches the system wherein the server application module is a web server application (page 2, lines 18-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the

teachings of the AAPA with Smith and Rawson in order to create a system capable of providing web-based services. One of ordinary skill in the art at the time of the invention would have been motivated to do because it allows for a system of web-based transactions to be implemented.

Response To Argument

1. In the remarks, applicant has argued in substance that:

(1) Smith as a whole teaches a source control system, which teaches away from the claimed invention.

(2) Rawson teaches away from the claimed invention in teaching the opposite of a system in which requests from a source are sent to different queues before processing.

(3) There is no basis for reading “mass storage” as “queue.”

(4) Rawson does not teach a discard queue that stores requests to be discarded.

(5) As per claims 2 and 10, Smith teaches away from the claimed limitation because Smith reduces the number of source requests.

(6) As per claims 3, 5, 11 and 13 Rawson teaches the processing of application program commands and teaches away from requests being serviced by the server application.

(7) As per claims 6 and 14, both Smith and Rawson teach away from the invention and each other, and the references in combination would appear to produce a seemingly inoperative device.

(8) As per claims 7 and 15, Rawson deals with requests from application programs so there are no “sessions” involved.

2. Examiner respectfully disagrees with Applicant’s arguments and resubmits that

As to point (1), the applicant's claimed invention, similar to Rawson, is a source control system. The new transactions are initiated by the source (Claim 1, lines 1-13).

As to point (2), Rawson teaches a system in which requests from a source are sent to different queues, however, the requests are directed from *one originating queue* as the claimed invention suggests (col. 5, lines 25-45, Fig. 3).

As to point (3), FOLDOC Dictionary of Computing defines storage to be any device into which data can be entered, in which they can be held, and from which they can be retrieved at a later time. A queue is also considered to be such a structure, into which data can be entered and drawn out of.

As to point (4), the Examiner has interpreted a discard queue to refer to immediately unprocessed "discarded" requests, similar to the card request queue of the Rawson system (col. 5, lines 42-44).

As to point (5), Smith reduces the number of source requests, however, the claimed invention similarly sends the target number of requests to the request queue and any remaining requests to the discard queue, thereby reducing the number of source requests processed.

As to point (6), the processing of the requests is passed from the request dispatcher to the server application side command initiator (fig. 3). Rawson's system does include the step of processing being serviced by the server application.

As to point (7), Smith and Rawson teach queueing systems of receiving and processing requests in an organized manner (Rawson, col. 5, lines 25-49, Smith, col. 2, lines 50-62).

As to point (8), the claimed invention discloses the existence of a "new session queue" and an "existing session request discard queue." However, no disclosure is made to indicate that

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there are a multitude of "sessions" rather than an ongoing existence of the disclosed queues. Further, the examiner has interpreted every set of requests in Rawson to be a queue (col. 5, lines 25-49). The actual, physical queues of Rawson (and the claimed inventions) are not created in independent "sessions." They have allocated physical space and exist regardless of the sessions involved

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sindya Narayanaswamy whose telephone number is (703) 305-8473. The examiner can normally be reached on 8 am to 5 pm, first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on (703) 308-0640. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sindya Narayanaswamy
July 11, 2004


ZARNI MAUNG
PRIMARY EXAMINER